REMARKS

Claims 1, 2, and 7-26 are pending in the application upon entry of the amendments and new claims. Claims 15-19 and 26 have been amended to more particularly describe certain aspects of the invention. Favorable reconsideration in light of the amendments and the remarks which follow is respectfully requested.

The Amendments

Claims 15, 19, and 26 have been amended to describe the offset distance of the waveplate from the centerline of the waveguides. Support for the amendments exists in the specification, for example on page 9. Claims 16-18 have been amended to specify that the optical paths are waveguides and thus the arrayed waveguide grating device is a guided wave system.

The Novelty Rejection

Claims 1, 11, 14-16, 18-20, 23, 25, and 26 have been rejected under 35 U.S.C. § 102(e) over Stone. Stone relates to an optical system, such as a router, that routes/switches a broad spectrum of light in free space. The Examiner notes Figs. 13a/b with particularity. The Examiner contends that Stone discloses first and second waveguides, a waveplate that intersects waveguides, an AWG, among other elements. However, there are several significant differences between Stone and the pending claims.

One distinction is the function (and functional differences are traceable to the structural differences, discussed below). The router of Stone functions by beam steering broadband light using mirrors. The optical integrated circuit of the claims divides a beam of light up and then recombines light of differing wavelengths into a coherent beam without birefringence.

The router of Stone manages paths of light in free space. In this connection, Column 4, lines 50-60 of Stone states that its systems accommodate freely propagating electromagnetic waves and its systems are NOT guided wave systems where the

optical carriers are confined to waveguides. The requirement of free space is reiterated in Column 6, lines 50-60. Contrary to plain meaning of Stone, the claims require an optical integrated circuit containing at least two waveguides. Since Stone fails to describe a system with waveguides, Stone cannot anticipate the invention.

Furthermore, in Stone, the waveplate does NOT intersect the light paths/waveguides for at least two reasons. Firsts, since there are no waveguides in the device of Stone, the waveplate shown in Fig. 13a does NOT intersect a waveguide. The waveplate of Stone does intersect a light path, but the light path is in free space. Second, the claims require that the waveplate intersect multiple waveguides. In Fig. 13a of Stone, only one optical paths is intersected by a given waveplate (the waveplate of Stone does not extend across the multiple optical paths of device).

The waveplate of Stone rotates the polarization of one broadband beam of light reflected by a mirror to have the same polarization as another broadband beam of light that is not reflected by a mirror. The waveplate of the claims mitigates and/or eliminates polarization dependent wavelength shift. That is, the waveplate of the claims mitigates and/or eliminates birefringence due to polarization dependent wavelength shift. For this additional reason, Stone and the claims are fundamentally different.

In order to establish anticipation, each and every claim feature must be disclosed in a single cited art document. Stone fails to disclose at least two waveguides and a waveplate that intersects multiple waveguides. Since Stone fails to disclose each and every feature of the claims, Stone cannot anticipate the claims.

The Obviousness Rejection

Claims 2, 7-10, 12, 13, 17, 21, 22, and 24 have been rejected under 35 U.S.C. § 103(a) over Stone in view of Inoue et al. Inoue et al relates to an optical waveguide circuit containing a waveplate intersecting waveguides, as shown in Fig. 33. The Examiner contends that Inoue et al makes up for some of the deficiencies of Stone (such as describe waveguides that are curvilinear).

Initially, it is noted that the waveplate intersecting the waveguides in Fig. 33 of Inoue et al is not substantially parallel to a centerpoint centrally located between first and second ends of the waveguides. This aspect of Inoue et al is notable in connection with claims 8, 11 and 25, for example.

Nevertheless, one skilled in the art would not combine the teachings of Stone and Inoue et al because of the fundamental differences in their respective devices. As explained above, the device of Stone employs free space optics to steer beams of broadband light. Stone repeatedly teaches that guided wave systems are not applicable. Inoue et al is a guided wave device, using waveguides to channel discrete wavelengths of light. One skilled in the art would therefore NOT combine the teachings of Stone with those of Inoue et al. Since one skilled in the art would not combine the teachings of Stone and Inoue et al, a *prima facie* case of obviousness has not been established.

Specifically addressing claims 10 and 13, Stone's optical system cannot accommodate a curvilinear waveguide because its optical path is straight since it is in free space. Therefore, the teaching of a curvilinear waveguide in Inoue et al does not apply to Stone.

Specifically addressing claims 14 and 16-19, Stone fails to mention an arrayed waveguide grating or planar device (see Column 4, line 57 specifically omitting planar devices). Therefore, one skilled in the art would not have combined the teachings of Stone and Inoue et al because they are inconsistent with each other.

Petition for Extension of Time

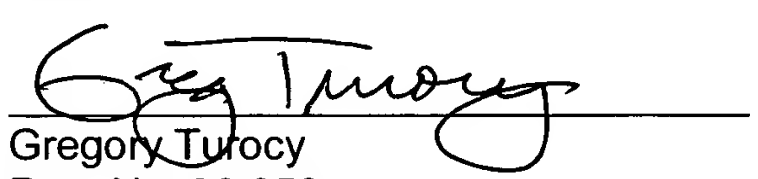
A request for a three month extension of time is hereby made (small entity status has been established). The Commissioner is authorized to charge the fees for the Three Month Petition to our Deposit Account No. 50-1063.

Should the Examiner believe that a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

In the event any fees are due in connection with the filing of this document, the Commissioner is authorized to charge those fees for a small entity to our Deposit Account No. 50-1063.

Respectfully submitted,

AMIN & TUROCY, LLP



Gregory Turocy
Reg. No. 36,952

24th Floor, National City Center
1900 East 9th Street
Cleveland, Ohio 44114
(216) 696-8730
Fax (216) 696-8731